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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/729,740	12/05/2003	David Allen	ST8653US.CIP1	1326

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EXAMINER	
HE, AMY	

ART UNIT	PAPER NUMBER
2858	

DATE MAILED: 11/08/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/729,740	ALLEN ET AL.	
	Examiner	Art Unit	
	Amy He	2858	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *20 September 2004*.

2a)☒ This action is **FINAL**. 2b)☐ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-41* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-41* is/are rejected.

7)☐ Claim(s) _____ is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☐ The specification is objected to by the Examiner.

10)☒ The drawing(s) filed on *05 December 2003* is/are: a)☒ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)
2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.
4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .
5) ☐ Notice of Informal Patent Application (PTO-152)
6) ☐ Other: _____.

DETAILED ACTION

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

1. Claims 1,2, 5-6, 13-14, 16, 22-24, 27-28, 31, 33-37, 40-41 are rejected under 35 U.S.C. 102(b) as being anticipated by Stewart et al. (U. S. Patent No. 5, 882, 590).

Referring to claims 1,13, 22-23, 31, 33-34 and 40-41, Stewart discloses a contaminant detecting system/method (in Figure 1) for determining the presence of a contaminant (sterilant; or the concomitant/contaminant, column 6, line 38) in a fluid used in a microbial decontamination process, comprising:

a capacitor (sensor module 8A, 8B) having first and second conducting elements, said fluid being a dielectric therebetween, and being used to process an article in the microbial decontamination process (column 5, lines 31-47; column 6, lines 26-35); and

sensing means (sensing element 124; or receiving unit 126, column 6, line 40) for sensing a change in an electrical property of the capacitor, said change in the electrical property varying according to the presence of the contaminant in the fluid (column 6, lines 40-45), said contaminant being removed (the sterilant along with any contaminant that's present in the sterilant is removed during the exhaust/purge phase of the sterilization process, column 6, line 61; or contaminant in the article is

sterilized/decontaminated during the sterilization/decontamination process of the sterilization system of Figure 1) from said article during the microbial decontamination process; said contaminant including a chemical (sterilant) used to effect microbial decontamination during a microbial decontamination process.

Referring to claims 2, 14, 24 and 35, Stewart discloses sensing capacitance (column 6, line 35).

Referring to claims 5 and 27, Stewart discloses a control means (sterilizer control system 12, column 7, lines 24-35) for receiving a measured value (sterilant concentration) from said sensing means (124; 126) indicative of the electrical property of said capacitor.

Referring to claim 36, Stewart discloses (a control system 12, column 7, lines 22-30) generating a measured value indicative of the electrical property of said capacitor.

Referring to claims 6, 16, 28 and 37, Stewart discloses means for comparing (column 7, lines 27-34) said measured value with a threshold to determine whether a contaminant is present in the fluid.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 3-4,15, 25-26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart et al. (U. S. Patent No. 5, 882, 590), in view of Philipp, "*Charge Transfer Sensing*".

Referring to claims 3-4,15, 25-26, Stewart discloses a capacitance sensor. Stewart does not specifically disclose a charge-transfer capacitance sensor IC for generating a digital value indicative of an input capacitance. Phillip discloses a charge-transfer capacitance sensor IC. It would have been obvious to a person having ordinary skill in the art at the time of the invention to modify the capacitance sensor of Stewart to be a conventional charge-transfer capacitance sensor IC, as taught by Philip, for obtaining more accurate capacitance measurement values in the range of low picoFarad or femotoFarad, and since Stewart suggests that any suitable semiconductor-based sensor module could be used (column 4, lines 34-38).

3. Claims 7-9, 12,17-18, 21, 29-30, 32 and 38-39 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart et al. (U. S. Patent No. 5, 882, 590).

Referring to claims 7-9, 12,17-18, 21, 29-30, 32 and 38-39, Stewart discloses the control means for comparing a measured value with a reference concentration range to indicate the acceptable sterilization condition. Stewart does not disclose that the control means determines the presence of a miscible/immiscible contaminant selected from the group consisting of: blood, urine, miscible soil, dirt, bone matter, skin, organ tissue, and immiscible soil, if said measured value is greater/less than said threshold value. It would have been obvious to a person of ordinary skill in the art at the time of the invention to

modify Stewart to disclose the control means for determining the presence of a miscible/immiscible contaminant selected from the group consisting of: blood, urine, miscible soil, dirt, bone matter, skin, organ tissue, and immiscible soil, if said measured value is greater/less than a threshold value, depending upon the different needs of a specific application, since changing the miscible/immiscible contaminants being detected does not change the function of the sterilization/decontamination system.

4. Claims 10-11 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Stewart et al. (U. S. Patent No. 5, 882, 590), in view of Rounbehler et al. (U. S. Patent No. 5, 470,754).

Referring to claims 10-11 and 19-20, Stewart discloses the control means for receiving a measured value indicative of the electrical property of the capacitor. Stewart does not disclose the control means detecting a spike in the measured value to determine whether a contaminant is present in the fluid. Rounbehler discloses detecting a spike to determine the presence of a contaminant (Figures 6-7, column 9, lines 48-58). A person or ordinary skill in the art would find it obvious at the time of the invention to modify Stewart to disclose detecting a spike in the measured sterilant concentration value to determine whether an immiscible contaminant is present in the fluid, as taught by Rounbehler, since it has been held to be within the general skill of a worker in the art to select a known tool for a known purpose on the basis of its suitability for the intended use as a matter of obvious design choice *In re Leshin,* 227 F.2d 197, 125 USPQ 416 (CCPA).

Response to Arguments

5. Applicant's arguments with respect to claims 1-41 have been considered but are moot in view of the new ground(s) of rejection.

Conclusion

6. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

7. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

Moseley (U. S. Patent No. 6, 660,231) discloses a capacitor sensor with a parallel plate configuration and gas sensitive material between the parallel plates for sensing oxidizing gases (chlorine and ozone).

Frank (US 2002/0109511) discloses measuring fuel concentration using a capacitance sensor. The dielectric constant of the fuel/electrolyte mixture is measured to determine the fuel concentration.

Michael et al. (U. S. Patent No. 4, 031,742) discloses (in Figure 9) a capacitance sensor in a bridge circuit.

8. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Amy He whose telephone number is (571) 272-2230. The examiner can normally be reached on 8:30am-5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, N. Le can be reached on 571-272-2233. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

AH
October 29, 2004.

N. Le
Supervisory Patent Examiner
Technology Center 2800